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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/702,469	11/07/2003	Sang Chul Yoon	P23878	8288

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EXAMINER	
JARRETT, RYAN A	
ART UNIT	PAPER NUMBER
2125	

SHORTENED STATUTORY PERIOD OF RESPONSE	NOTIFICATION DATE	DELIVERY MODE
3 MONTHS	02/02/2007	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Notice of this Office communication was sent electronically on the above-indicated "Notification Date" and has a shortened statutory period for reply of 3 MONTHS from 02/02/2007.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No.	Applicant(s)	
	10/702,469	YOON ET AL.	
	Examiner	Art Unit	
	Ryan A. Jarrett	2125	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *27 November 2006 and 26 December 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,3,4 and 7* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,3,4 and 7* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1, 3, 4, and 7 are pending in the application and are presented below for examination.

Continued Examination Under 37 CFR 1.114

2. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 11/27/2006 has been entered.

Priority

3. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Specification

4. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required:

There is no antecedent basis in the specification for the term "using", as recited in claim 1 line 5. This term should be changed to "based on" (per [0011] line 6, [0022] lines 1 and 3).

Likewise, there is no antecedent basis in the specification for the term "using" in claim 1 line 8. This term should be changed to "based on" (per [0011] line 8, [0022] line 4).

There is no antecedent basis in the specification for the term "physically separate", as recited in claim 1 line 11.

There is no antecedent basis in the specification for the term "when" as it is used in claim 1 line 13.

There is no antecedent basis in the specification for the limitation "wherein the central controller transmits signals to and receives signals from the protocol converter using the Ethernet communications protocol", as recited in claim 1 line 15.

There is no antecedent basis in the specification for the limitation "transmitting, by the central controller, the received control command based on an Ethernet communication protocol to a protocol converter", as recited in claim 7 line 6.

There is no antecedent basis in the specification for the term "physically separate", as recited in claim 7 line 8.

The claims should be re-written using only the exact language contained in the original disclosure. This is considered necessary in order to insure certainty in construing the claims in the light of the specification, and to clarify issues of enablement and new matter.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

6. Claims 1, 3, 4, and 7 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

There is no support in the original specification for the term "using", as recited in claim 1 line 5. This term should be changed to "based on" (per [0011] line 6, [0022] lines 1 and 3).

Likewise, there is no support in the original specification for the term "using" in claim 1 line 8. This term should be changed to "based on" (per [0011] line 8, [0022] line 4).

There is no support in the original specification for the term "physically separate", as recited in claim 1 line 11.

There is no support in the original specification for the term "when" as it is used in claim 1 line 13.

There is no support in the original specification for the limitation "wherein the central controller transmits signals to and receives signals from the protocol converter using the Ethernet communications protocol", as recited in claim 1 line 15.

There is no support in the original specification for the limitation "transmitting, by the central controller, the received control command based on an Ethernet communication protocol to a protocol converter", as recited in claim 7 line 6.

There is no support in the original specification for the term "physically separate", as recited in claim 7 line 8.

Claims 3 and 4 depend from claim 1 and incorporate the same deficiencies.

The claims should be re-written using only the exact language contained in the original disclosure. This is considered necessary in order to insure certainty in construing the claims in the light of the specification, and to clarify issues of enablement and new matter.

7. Claims 1, 3, 4, and 7 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. Claims 1 and 7 contain subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

The specification appears to disclose two separate embodiments. The first embodiment discloses a central control system comprising a central controller and a protocol converter locally attached through a cable to a serial port of the central controller in accordance with a serial protocol, such as RS-232. In the first embodiment, the protocol converter converts between a serial protocol, such as RS-232, and an air conditioner communication protocol, such as RS-485. Unlike the second embodiment, the protocol converter of the first embodiment does not convert an Ethernet protocol at all. This is because an Ethernet protocol is not a serial protocol, such as RS-232, as disclosed in the first embodiment. Rather, network nodes using an Ethernet protocol are linked by coaxial cable, by fiber optic cable, or by twisted-pair wiring. None of these cables can be considered to employ a serial protocol, such as RS-232. This embodiment corresponds to original "system" claim 1, and is described in the specification at [0014]-[0029] and Figs. 2-3.

The second embodiment discloses a "method" in which a protocol converter converts a control command based on an Ethernet communication protocol into a control command in the form of an air conditioner communication protocol. Unlike the first embodiment, this second embodiment does not disclose a "central controller" at all.

At best, it must be assumed that the central controller and protocol converter are the same unit. Thus, they cannot be separate entities, locally attached through a cable, as disclosed in the first embodiment. This second embodiment corresponds to original "method" claim 7, and is described in the specification at [0030]-[0034] and Fig. 4.

During the course of prosecution, independent claim 1 has been amended in such a way as to incorporate features from the second embodiment, and independent claim 7 has been amended in such a way as to incorporate features from the first embodiment. For example, claim 1 has been amended to recite a protocol converter that transmits and receives signals using the Ethernet communications protocol. And claim 7 has been amended to recite a central controller. These amendments are not proper since the two embodiments are mutually exclusive and distinct, and are largely incapable of being used together.

As such, one of ordinary skill in the art would not know how to make the claimed inventions with respect to claims 1 and 7. For example, regarding claim 1, one would not know how to transmit and receive signals using Ethernet protocol (as claimed) in accordance with a serial protocol, such as RS-232 (as disclosed in the specification). This is because Ethernet protocol is not a serial protocol. And regarding claim 7, one would not know how to transmit, by the central controller, the received control command based on an Ethernet communication protocol to a protocol converter, since the specification discloses that the central controller transmits the received control command to the protocol converter based on a serial protocol, such as RS-232, and an Ethernet protocol is not a serial protocol. Also, regarding claim 7, one would not know

how to use the claimed protocol converter to directly transmit data to the claimed remote controller, while bypassing the claimed central controller.

Claims 3 and 4 depend from claim 1 and incorporate the same deficiency.

Claim Rejections - 35 USC § 102

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

9. Claims 1, 3, 4, and 7 are rejected under 35 U.S.C. 102(b) as being anticipated by Takai et al (U.S. Pub 2002/0029096).

Takai et al. discloses:

1. **A central control system** (e.g., Fig. 4) **that controls multiple air conditioners** (e.g., [0014]-[0015]) **including at least one outdoor device** (e.g., Fig. 1 #301) **and a plurality of indoor devices** (e.g., [0026]), **comprising:**

a central controller (e.g., Fig. 1 #110, 140-143) **connected to the multiple air conditioners through a dedicated line** (e.g., Fig. 1 #401), **for transmitting and receiving signals using an air conditioner communication protocol** (e.g., [0028]), **to control the multiple air conditioners** (e.g., [0027], [0030], [0031], [0049]), **the central controller being configured to connect to a remote controller** (e.g., Fig. 4 #700-702) **via an Internet network** (Figure 4), **for transmitting and receiving signals using an Ethernet communication protocol** (e.g., [0002], [0047]-[0049]) **and to receive a control command from the remote controller for the multiple air conditioners** (e.g., [0027], [0049]); **and**

a protocol converter (e.g., Fig. 1 #120, 130, 200-203) **physically separate from and locally attached through a cable** (e.g., Fig. 1 #400) **with the central controller, that performs a communication protocol conversion of a signal** (e.g., [0047]-[0049]) **when the control command is transmitted to the multiple air conditioners through the Internet network** (e.g., [0027], [0047]-[0049]), **wherein the central controller transmits signals to and receives signals from the protocol converter using Ethernet communication protocol** (e.g., [0002], [0047]-[0049]) **and the protocol converter converts signals between Ethernet communication protocol and the air conditioner communication protocol** (e.g., [0002], [0047]-[0049]),

wherein the central controller comprises a signal storage device (e.g., Fig. 1 #110) **that stores the control command received through the Internet network, an Internet data storage device that stores data for accessing the Internet network and IP address data** (e.g., [0047]-[0049]), **and a controller that controls a flow of signals transmitted and received through the Internet network, and controls the protocol converter to perform a communication protocol conversion of a signal** (e.g., Fig. 1 #110, 140-143).

3. The central control system as set forth in claim 1, wherein the central controller comprises:

a control program driver that drives a control program accessible by a GUI (Graphic User Interface) for controlling the multiple air conditioners (e.g., [0043]-[0044], [0047]-[0048]).

4. The central control system as set forth in claim 3, wherein the central controller comprises:

a control program transmitter that transmits the control program to the remote controller through an Internet browser in response to a request from the remote controller received through the Internet network (e.g., [0048]-[0049]).

7. **A method of operating a central control system for multiple air conditioners** (e.g., [0014]-[0015], [0027], [0049]), **comprising:**

receiving by a central controller (e.g., Fig. 1 #110, 140-143) **a control command for the multiple air conditioners that is transmitted from a remote controller** (e.g., Fig. 4 #700-702) **over an Internet network** (e.g., Fig. 4, [0047]-[0049]);

transmitting, by the central controller (e.g., Fig. 1 #110, 140-143), **the received control command based on an Ethernet communication protocol** (e.g., [0002], [0047]-[0049], EN: *because the command is received with a browser, Ethernet protocol is used/anticipated*) **to a protocol converter** (e.g., Fig. 1 #120, 130, 200-203), **physically separate from and locally attached through a cable** (e.g., Fig. 1 #400) **with the central controller;**

converting, by the protocol converter, the received control command into a control command based on an air conditioner communication protocol (e.g., paragraph 28, 29, 31);

transmitting the control command based on the air conditioner communication protocol to the multiple air conditioners (e.g., paragraph 28-31, 40);

performing a control operation of the multiple air conditioners in response to the control command based on the air conditioner communication protocol (e.g., paragraph 26-29, 31, 47-49);

converting, by the protocol converter, control condition data of the multiple air conditioners into control condition data based on an Ethernet communication protocol

(e.g., [0002], [0047]-[0049], EN: *because the command is received with a browser, Ethernet protocol is used/anticipated*); **and**

transmitting, by the protocol converter, data representing control conditions of the multiple air conditioners to the remote controller over the Internet network (e.g., paragraph 47, 48).

The Office would like to point out that any reference to specific figures, columns and lines should not be considered limiting in any way, the entire reference is considered to provide disclosure relating to the claimed invention.

10. Claims 1, 3, 4, and 7 are rejected under 35 U.S.C. 102(e) as being anticipated by Masui et al (U.S. Pub 2003/0140637).

Applicant cannot rely upon the foreign priority papers to overcome this rejection because a translation of said papers has not been made of record in accordance with 37 CFR 1.55. See MPEP § 201.15.

For example, Matsui et al discloses (claim 7) a method of operating a central control system for multiple air conditioners, comprising:

receiving by a central controller (e.g., Fig. 1 #13 and #10) a control command for the multiple air conditioners that is transmitted from a remote controller over an Internet network (e.g., paragraph 134, 141, 148, reference number 13);

transmitting, by the central controller, the received control command based on an Ethernet protocol to a protocol converter (e.g., Fig. 1 #6), physically separate from and locally attached through a cable with the central controller (EN: *central processing means 10 receives the command via reference number 13 in Ethernet protocol, the command is then sent to the converter 6, therefore an Ethernet communications protocol is used*);

converting by the protocol converter the received control command into a control command based on an air conditioner communication protocol (reference number 6, paragraph 143, 148);

transmitting the control command based on the air conditioner communication protocol to the multiple air conditioners (paragraph 143, 148);

performing a control operation of the multiple air conditioners in response to the control command based on the air conditioner communication protocol (paragraph 148);

converting, by the protocol converter, control condition data of the multiple air conditioners into control condition data based on an Ethernet communication protocol (e.g., Fig. 1 #6); and

transmitting, by the protocol converter, data representing control conditions of the multiple air conditioners to the remote controller over the Internet network (paragraph 149).

The Office would like to point out that any reference to specific figures, columns and lines should not be considered limiting in any way, the entire reference is considered to provide disclosure relating to the claimed invention.

Response to Arguments

11. Applicant's arguments, see pages 5-7, filed 11/27/2006, with respect to the rejection of claims 1-15 under 35 U.S.C. 102(b) as being anticipated by Takai et al. US 2002/0029096 have been fully considered but they are not persuasive.

In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies on page 6 of the arguments (i.e., "Applicants submit that their protocol converter only performs protocol conversion on data received from a remote controller (see, for example, paragraph [0024] of Applicants' specification. In this regard, Applicants submit that their central controller is connected to air conditioners through a dedicated line, through which control commands originating from the central controller (rather than the remote controller) can be transmitted. Thus, as described, for example, at paragraph [0022] of Applicants' specification, the central controller 300 controls the multiple air conditioners 250 based on air conditioner communication protocols, while the remote controller C controls the multiple air conditioners 250 using a suitable protocol, such as, for example, an Ethernet communication protocol.") are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

12. Applicant's arguments, see pages 7-8, filed 11/27/2006, with respect to the rejection of claims 7 and 8 under 35 U.S.C. 102(e) as being anticipated by Masui et al. US 2003/0140637 have been fully considered but they are not persuasive.

Applicants submit that Masui's transmission means 6 is not physically separate from and attached locally through a cable with the central processing means 10 and transmission means 13 (e.g., see Fig. 1 of Masui et al.). However, in Fig. 1, transmission means is clearly depicted within a "box" 6 that is physically separate from and attached locally through a "cable" (depicted line) with the central processing means depicted in "box" 10. Whether or not these components may be contained within some larger "box" is not considered relevant to the language of the claims.

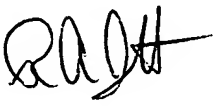
Conclusion

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ryan A. Jarrett whose telephone number is (571) 272-3742. The examiner can normally be reached on 10:00-6:30 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Leo Picard can be reached on (571) 272-3749. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Ryan A. Jarrett
Examiner
Art Unit 2125



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